

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 1-9 remain active in the application subsequent to entry of this Amendment.

As a preliminary matter, the examiner acknowledges applicants' claim for benefit of priority but suggests that none of the certified copies of the priority documents have been received; *see* item 12(c)1. of the Office Action Summary included with the current communication. It is also mentioned in item 1, page 2 of the current Action.

Attention is directed to the filing of a certified copy of the priority document on July 15, 2004. As evidence of this filing I include a copy of the cover sheet, first two pages of the priority document and a photocopy of the postcard receipt showing the Office's receipt of this document.

Responsive to the examiner's objection to the drawing, a substitute sheet is submitted herewith which deletes the Japanese character appearing in the upper left-hand corner of the drawing as originally filed.

The examiner has rejected claims 1-9 of the application (all pending claims) as failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Particular attention is paid to claims 1-3, 8 and 9 which are criticized for the use of the term "screen-type". In this response the involved claims have been amended in order to remove "screen-type" wherever it appears and to describe the centrifugal separator as having an attached screen. Basis for this terminology may be found in the last several lines of page 16 of the description of the invention. This amendment resolves the claim clarity concerns expressed on pages 2 and 3 of the Official Action.

The balance of the Official Action relates to two prior art-based rejections, the first directed to claims 1-9 and based upon Desai et al U.S. 5,653,673 in view of a British patent to Bird Machine Company GB 1,065,340 and a textbook on physics by David et al. Before addressing this rejection it is appropriate to review the state of the art and applicants' contribution to improving it.

The object of the present invention is to provide an improved process for producing aromatic dicarboxylic acids which makes it possible to prevent clogging of the centrifugal separator and to conduct a solid-liquid separation efficiently when a slurry containing crystals of

an aromatic dicarboxylic acid obtained from a reaction is subjected to solid-liquid separation, by using a screen-type centrifugal separator having a screw conveyor fitted in it; *see* page 2, line 21- page 3, line 3 of the description.

The examiner cites three references and argues that the present invention is unpatentable based on a combination of these three references.

It is true that Desai et al discloses a general production method of aromatic carboxylic acid.

Bird Machine Co. is representative of the state of the art prior to the present invention, in that it discloses a screen-type centrifugal separator, that is a centrifugal separator with screen attached. This centrifugal separator is a conventional screen-type centrifugal separator. This conventional screen-type centrifugal separator is described as follows: "in the case of a screen-type centrifugal separator provided with a screw conveyor, clogging is promoted by the cakes formed in a compacted state on the inside of the screen." *See* page 2, lines 4-7 of the present specification. Clearly the context of the Bird Machine Co. reference relates to a conventional technical level. The present invention solves the problem in that troubled and encumbered such conventional centrifugal separators.

The physics textbook of David et al discloses only known physical relationships, that is the calculation of centrifugal force. Even with the benefit of this information at hand, one of ordinary skill in the art cannot calculate the escape of an amount of crystals in the screen-type centrifugal separator. Further, there is no description nor suggestion that a screen with an opening size that allows partial escape of crystals in the supplied slurry through the screen openings could be used as the screen of the screen-type centrifugal separator.

In summary, these three references are merely illustrative of conventional techniques and not suggestive of the claimed invention.

Therefore, one of ordinary skill in the art would not think to combine these three references nor does the (unlikely) combination arrive at the process of the present invention.

In a second rejection, claims 1-3 and 6-9 only are rejected as lacking patentability over two of the three previously discussed references, namely Bird Machine Co. and David et al, but this time U.S. 5,971,907 to Johannemann et al is used as the "lead" reference instead of the Desai et al patent as in the previous rejection.

The Johannemann reference really adds nothing to the combination of references apart from the combination previously discussed and therefore does not remedy the defects in the first rejection. Johannemann relates to an apparatus for continued separation of solid-liquid mixtures by decantation in which centrifugal forces are employed. A screw conveyor is included but there is no mention or disclosure of a screen or similar-type apparatus associated with the separator device described in this document.

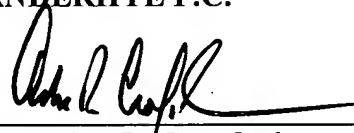
The deficiencies in the secondary references remain the same as those discussed above and this rejection is similarly ill-founded. Withdrawal of the rejection of claims 1-3 and 6-9 is appropriate.

Reconsideration of this application and favorable action are solicited. Should the examiner require further information, please contact the undersigned by telephone.

Respectfully submitted,

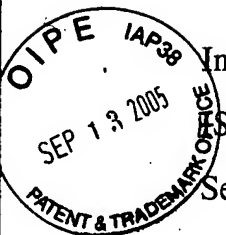
NIXON & VANDERHYTE P.C.

By: _____


Arthur R. Crawford
Reg. No. 25,327

ARC:eaw
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Patent Application of

ISOOGAI, T. et al.

Serial No. 10/785,400

Filed: February 25, 2004

For: PROCESS FOR THE PREPARATION OF AROMATIC
DICARBOXYLIC ACIDS

* * * * *

COPY

Atty. Ref.: 1417-451

TC/A.U.: 1625

Examiner:

July 15, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

SUBMISSION OF PRIORITY DOCUMENTS

It is respectfully requested that this application be given the benefit of the foreign filing date under the provisions of 35 U.S.C. §119 of the following, a certified copy of which is submitted herewith:

Application No.

Country of Origin

Filed

2001-259353

JP

29 August 2001

Respectfully submitted,

NIXON & VANDERHYE P.C.

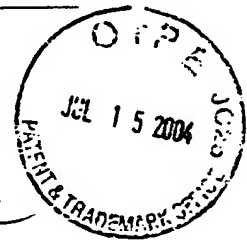
By: _____

Arthur R. Crawford
Reg. No. 25,327

ARC:eaw
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

COPY

Serial No.: 10/785400
Applicant: ISOGAI et al
Title: Process for the preparation of aromatic hydrocarbons...
Atty: ARC
Date: 7/15/04
Client: 1917-451
Ref: 1917-451
☐ Amendment
☐ Pages Specification
☐ Claims
☐ Sheets Drawings: Formal ☐
Informal ☐
☐ Declaration (☐ Pages)
☐ Assignment
☒ Priority Document
☐ Base Issue Fee Transmittal
☐ Fee (Check)
Other: Sub of Priority Doc



COPY

日 本 国 特 許 庁
JAPAN PATENT OFFICE

別紙添付の書類に記載されている事項は下記の出願書類に記載されている事項と同一であることを証明する。

This is to certify that the annexed is a true copy of the following application as filed with this Office.

出 願 年 月 日 2 0 0 1 年 8 月 2 9 日
Date of Application:

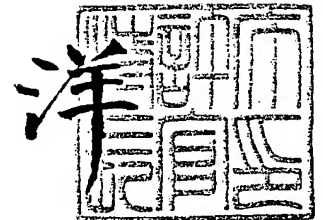
出 願 番 号 特 願 2 0 0 1 - 2 5 9 3 5 3
Application Number:
[ST. 10/C]: [J P 2 0 0 1 - 2 5 9 3 5 3]

願 人 三 菱 化 学 株 式 会 社
Applicant(s):

2 0 0 4 年 7 月 6 日

特許庁長官
Commissioner,
Japan Patent Office

小 川



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COPY

【書類名】 特許願

【整理番号】 J07363

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【あて先】 特許庁長官殿

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C07C 63/24
C07C 63/26
C07C 63/38
C07C 51/265

【発明の名称】 芳香族ジカルボン酸の製造方法

【請求項の数】 4

【発明者】
【住所又は居所】 福岡県北九州市八幡西区黒崎城石1番1号 三菱化学株式会社内
【氏名】 磯貝 隆行

【発明者】
【住所又は居所】 福岡県北九州市八幡西区黒崎城石1番1号 三菱化学株式会社内
【氏名】 沼田 元幹

【特許出願人】
【識別番号】 000005968
【氏名又は名称】 三菱化学株式会社

【代理人】
【識別番号】 100097928
【弁理士】
【氏名又は名称】 岡田 数彦

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